



# The Silent Struggles We Can No Longer Ignore

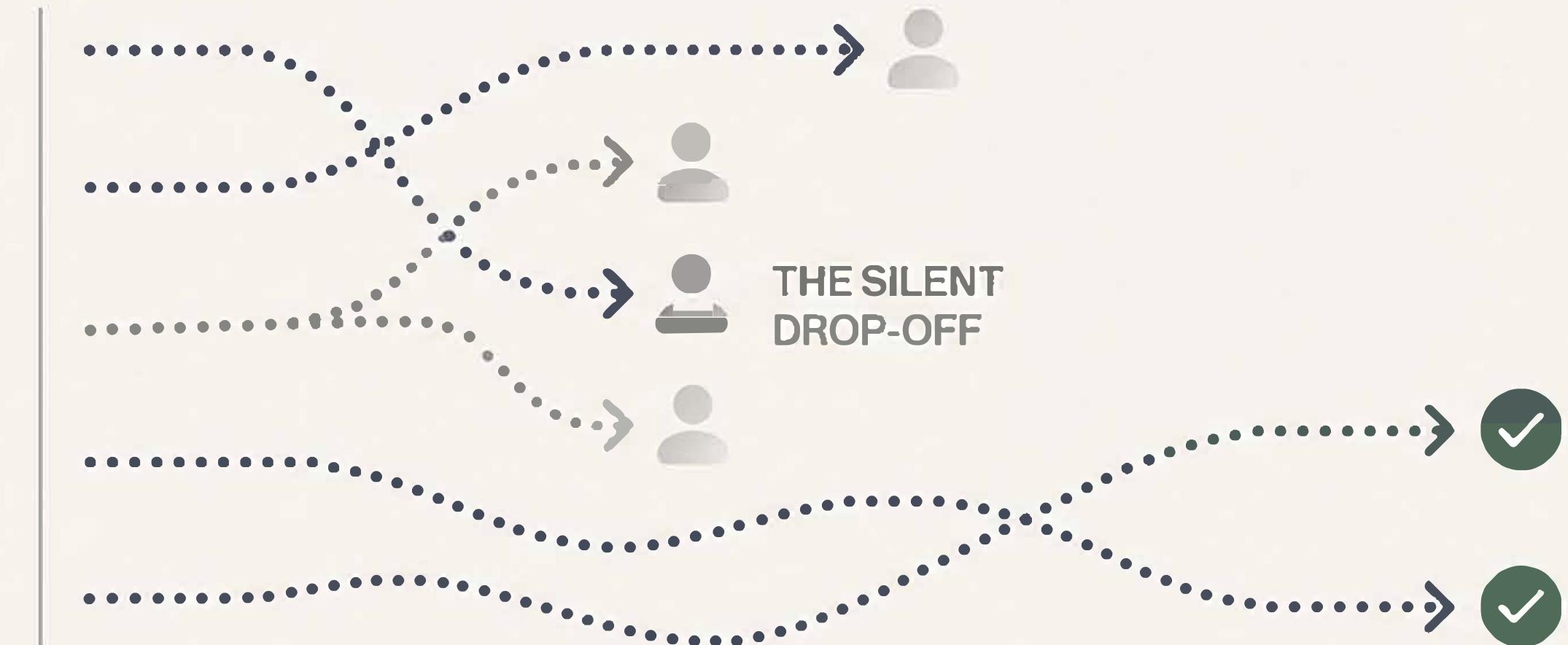
How TrapAlert Makes the  
Invisible, Visible



# Every day, users get stuck. Most of them never tell you.

Many user struggles are invisible to standard analytics. Users facing barriers often don't file reports; they simply leave.

This creates a blind spot where frustration thrives, especially for users with disabilities.



'Only ~43% of users might leave feedback when they encounter an issue.'

'For over 14 years, lack of keyboard accessibility has remained one of the top five most problematic issues for screen reader users, indicating systemic neglect.'

# Meet the user trapped in a loop.

## Persona Snapshot

- **Who:** Screen Reader / Keyboard-Only User
- **Context:** Navigates the web without a mouse due to visual or motor impairments.
- **The Barrier:** A ‘keyboard trap’ in a modal or form, where they can tab in but cannot tab out, rendering the page unusable.

*“As a blind user navigating with a screen reader, I want websites to let me move freely through all content via keyboard, so that I never get stuck on an element and can accomplish my goals without frustration.”*

## The Unseen Signal:

They might press the Tab key 15+ times with no focus change ('Dead-End Tab') before being forced to abandon the entire task.



# And the user who gives up in confusion.

## Persona Snapshot

- Who: User with a Neurodiverse Condition (e.g., ADHD)
- Context: Easily overwhelmed by confusing UI, unclear workflows, or unexpected behaviour.
- The Barrier: A button that provides no feedback, or an overly complex form that erodes their confidence. Their frustration is often dismissed as 'user error.'

*'As an easily overwhelmed user, I want interfaces that guide me and don't mislead or confuse, so that I can complete my task without getting frustrated or giving up halfway.'*

## The Unseen Signal

They rapidly click a non-responsive element ('Rage Click') or start typing in a form field only to delete it and leave ('Input Abandonment').



# The developers building your product cannot feel this pain.

The core problem:

## Technical Privilege:

Teams have the power to fix issues but often lack the lived experience of disability.

**Data Blindness:** Traditional analytics show *that* users drop off, but not *why*.

**The Result:** Teams unintentionally design for ‘average’ users, perpetuating exclusion.



“As a front-end developer committed to accessibility, I want a real-time alert and replay when any user struggles... so that I can quickly understand the issue and fix the underlying cause.”

# We built a lens to see what's broken.

## Product Introduction

TrapAlert is an accessibility smoke detector. It's a lightweight SDK that runs in the background, specifically designed to detect behavioural signals of user frustration and struggle.



## How it Works

- 1. Detects:** Identifies patterns like rage clicks, dead-end tabs, and U-turns in real time.
- 2. Captures:** Records the critical moment with a session replay and DOM snapshot.
- 3. Alerts:** Delivers actionable evidence of a real user's struggle directly to the product team.

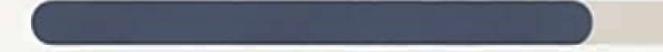
The Promise: Move from reactive fixes to proactive inclusion by making empathy a data-driven practice.

# Where frustration becomes a blueprint for a fix.

TrapAlert Admin Dashboard

Session Replay

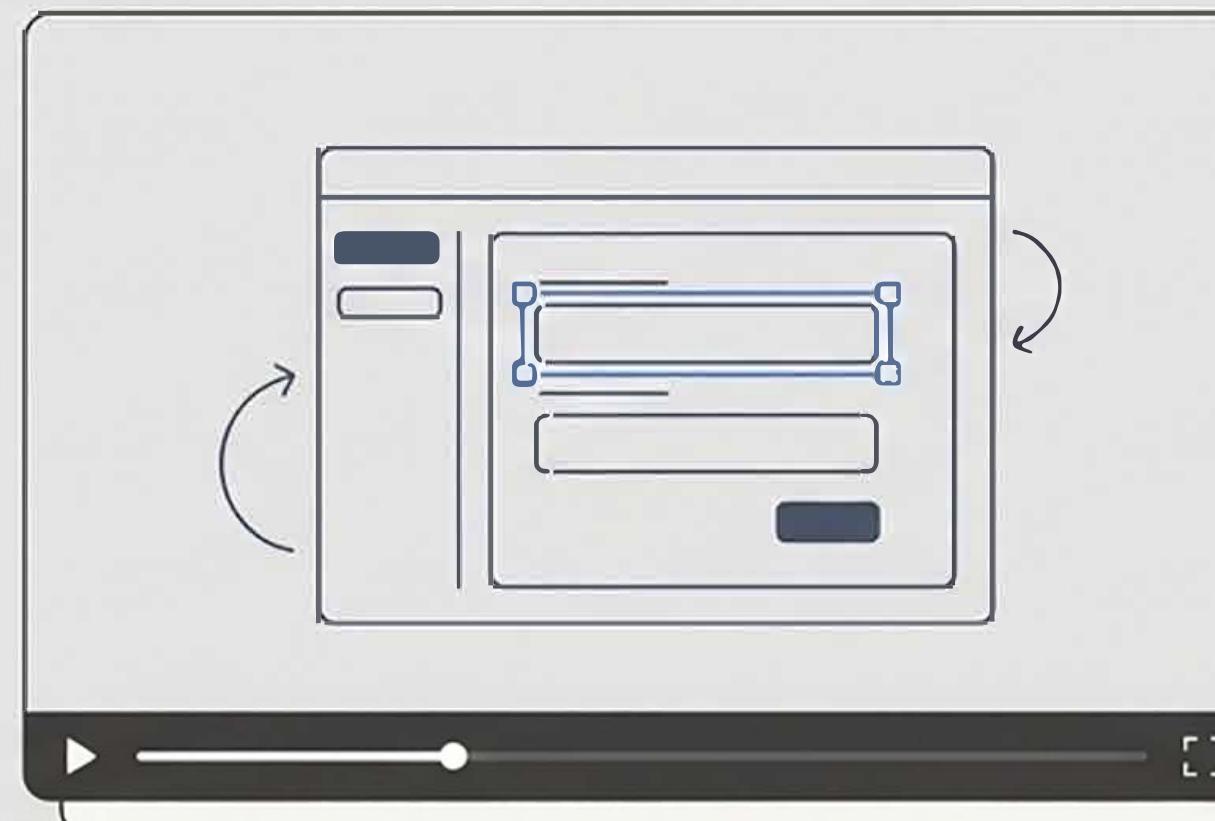
**Struggle Score**



Frustration: High

Signal Identified !

Dead-End Tab Detected  
(15+ tabs)



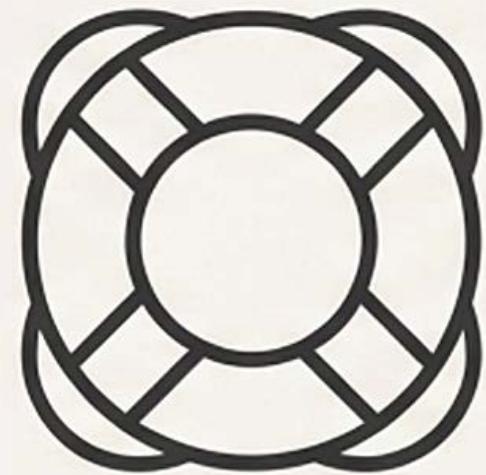
Actionable Insight

```
div class="modal-overlay"
  tabindex="-1"
</div>
```

This isn't just a bug report; it's a direct, visceral connection to the user's experience. It closes the empathy gap and spurs immediate action.

# With new insight comes new responsibility.

Observing user struggle is a privilege that demands an ethical, privacy-first approach. We stress-tested our concept against challenging scenarios to ensure we build a tool that helps, not harms.



Immediate Aid vs. Post-Hoc  
Insight: Does the tool help the  
user in the moment, or just  
the developer later?

Privacy vs. Insight:  
How do we gather evidence  
without becoming  
surveillance?

Performance vs. Impact:  
How do we capture rich data  
without degrading the user  
experience?

# Our Commitments to Responsible Design

## Empowering the User

### Tension

‘Stuck and Watched’

### Commitment

We are exploring features for real-time user aid, like an accessible tip ('Press Esc to exit') when a trap is detected. Our goal is not to treat users as mere data points.

## Privacy by Design

### Tension

Session Replays and PII

### Commitment

TrapAlert is built to be privacy-first. We automatically mask or avoid capturing Personally Identifiable Information (PII) in all recordings. We provide clear consent guidelines to avoid violating user trust or wiretapping laws.

## A Lightweight Footprint

### Tension

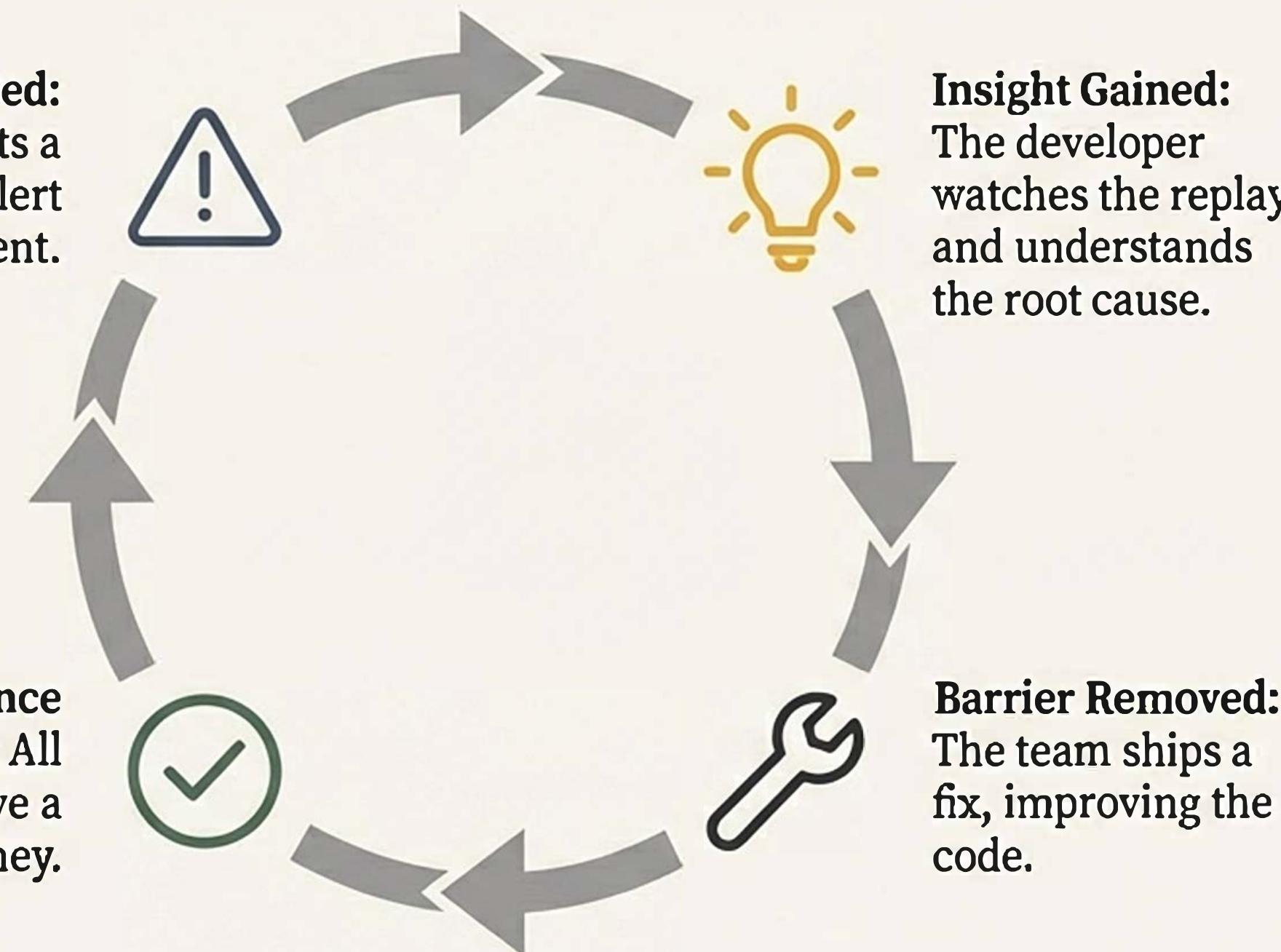
Data Load at Scale

### Commitment

We engineered TrapAlert to be as lightweight as possible. It uses data sampling, compression, and captures short, targeted clips around frustration events—not entire sessions—to minimise impact on page performance, battery life, and its own carbon footprint.

# From a single fix to a virtuous cycle.

**Struggle Detected:**  
A user hits a barrier; TrapAlert captures the event.



**Experience Improved:** All future users have a smoother journey.

**Insight Gained:**  
The developer watches the replay and understands the root cause.

**Barrier Removed:**  
The team ships a fix, improving the code.

## The Second-Order Effect

This process fosters a more inclusive mindset. Teams start to proactively think about accessibility to avoid seeing more struggle sessions in their dashboard. The needs of marginalised users are now backed by undeniable evidence.

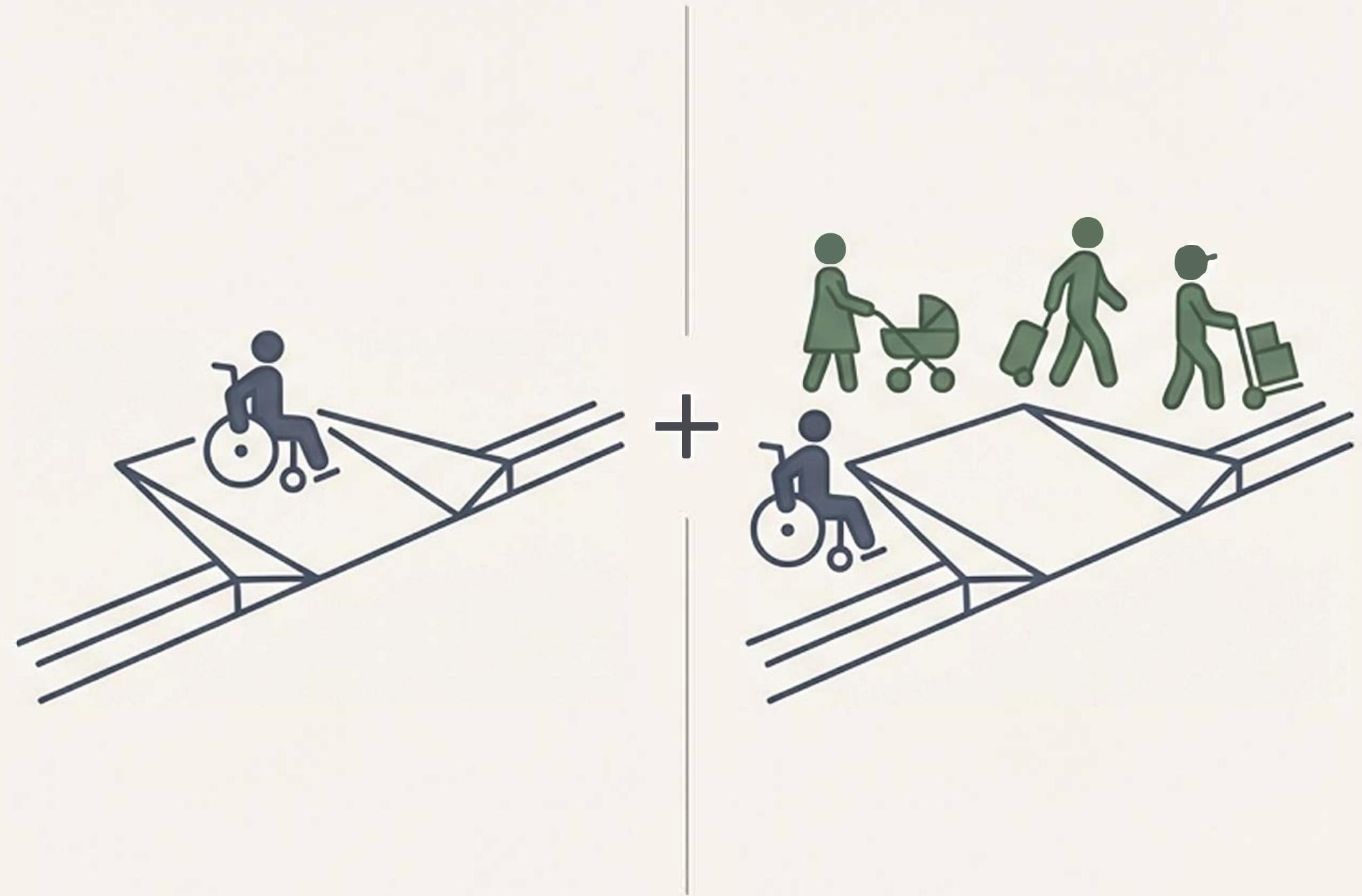
# Solving for the few improves the experience for all.

## The Curb-Cut Effect in Digital Design.

Just as curb cuts in pavements, designed for wheelchair users, also benefit parents with prams, travellers with luggage, and delivery workers, fixing accessibility issues in software creates a better product for everyone.

‘Better form design helps everyone, not just those who struggle with cognitive load.’

**Business Impact:** Reducing user frustration correlates with higher conversion, retention, and overall customer satisfaction.



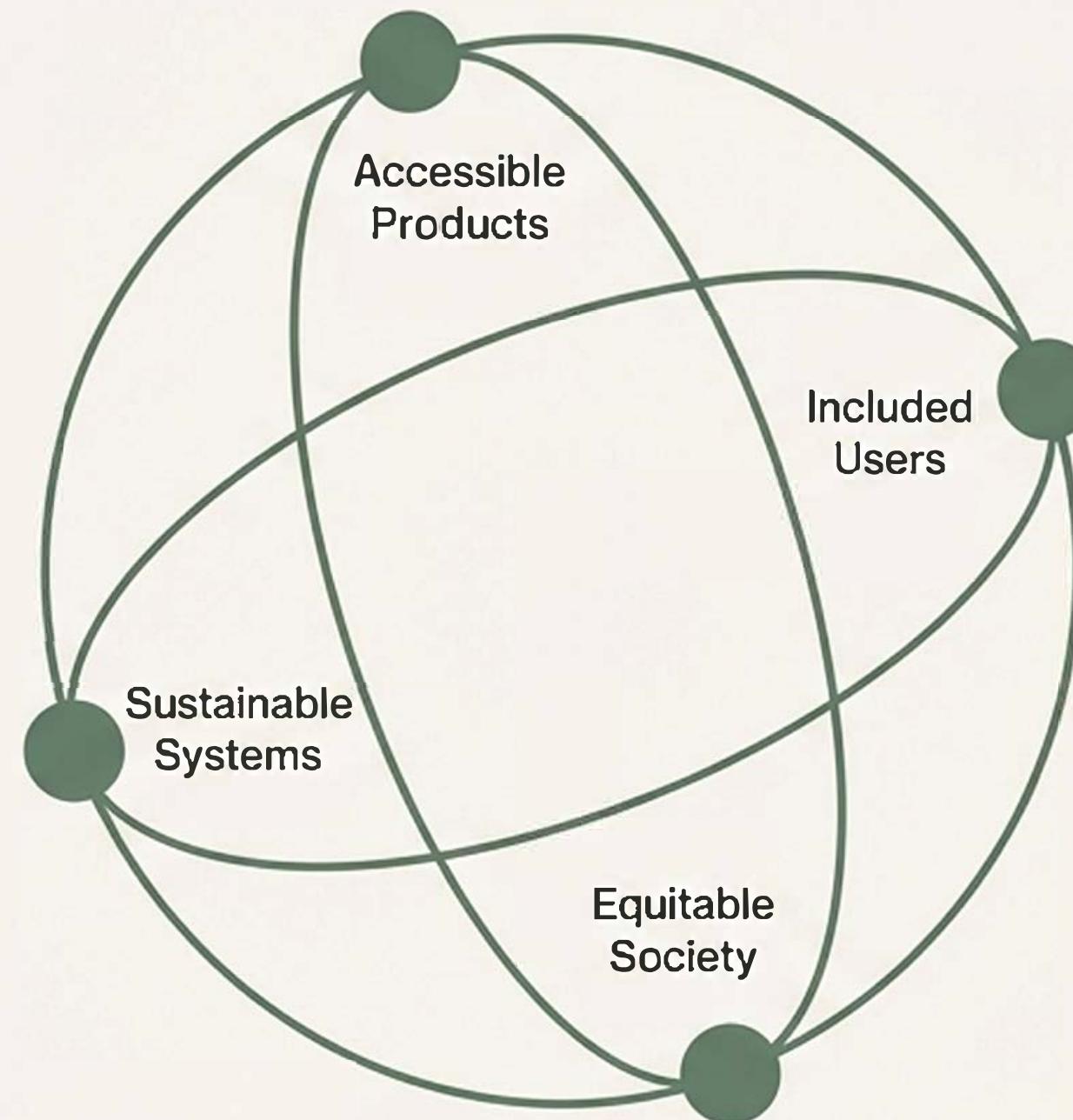
# A more equitable and efficient digital world.

## For Industry:

Behavioural observability for accessibility becomes a standard for quality. Data from tools like TrapAlert could inform future WCAG guidelines and best practices.

## The Sustainability Link:

A more accessible web is a more efficient one. When users complete tasks faster with fewer retries, it reduces redundant server calls, data transfer, and energy use at scale.

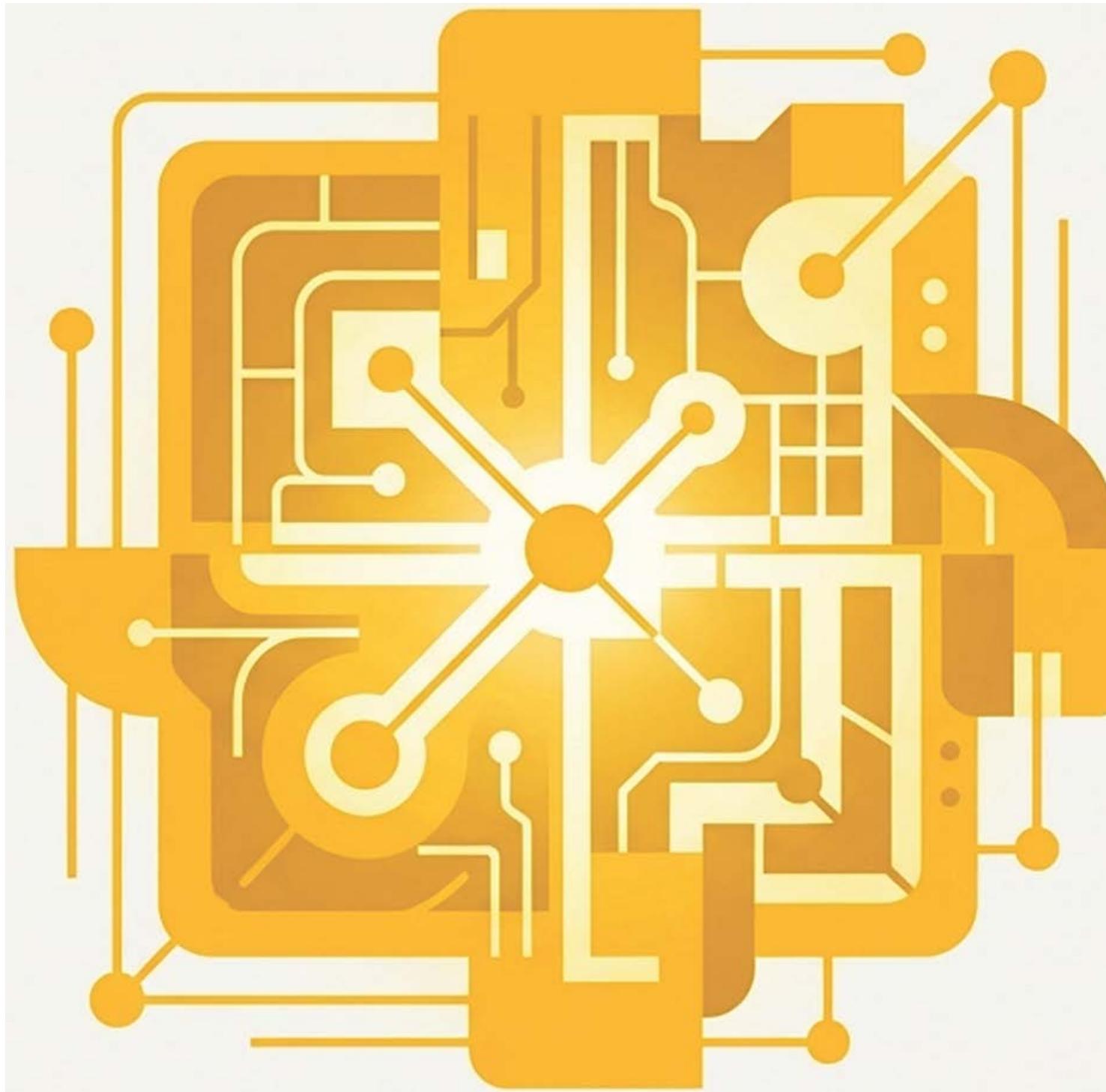


## For Users:

Users with disabilities expect that their struggles will be seen and fixed, shifting the power dynamic from helpless frustration to implicit participation in product improvement.

## For Society:

Lowering digital barriers leads to greater participation in e-commerce, education, and government services. This contributes to higher employment and social equity for people with disabilities.



**Digital inclusion isn't about compliance checklists. It's about closing the gap between intent and experience.**

**From**

Invisible struggles and silent abandonment.

**To**

Data-driven empathy and proactive fixes.

The most damaging friction in your product is the friction you cannot see. It's time to turn on the lights.